neutralizing or modulating the production of anti-myelin basic protein, comprising identifying a multiple sclerosis patient having an HLA-DR2 haplotype, wherein the presence of the HLA-DR2 haplotype in the patient identifies a patients that will exhibit low or undetectable anti-MBP levels in response to treatment with the peptide.

17 2. A method of screening for multiple sclerosis patients that exhibit low or undetectable anti-MBP levels in response to treatment with a peptide of from about 8 to about 25 amino acids and having a sequence contained within amino acid residues 61-106 of SEQ ID NO:1, including substitutions, additions or deletions thereof, provided the peptide is capable of neutralizing or modulating the production of anti-myelin basic protein, comprising screening multiple sclerosis patients for the presence of an HLA-DR2 haplotype, wherein the presence of the HLA-DR2 haplotype in the patient indicates patients that will exhibit low or undetectable anti-MBP levels in response to treatment with the peptide.

18 3. A method of predicting therapeutic efficacy of treatment of a multiple sclerosis patient with a peptide of from about 8 to about 25 amino acids and having a sequence contained within amino acid residues 61-106 of SEQ ID NO:1, including substitutions, additions or deletions thereof, provided the peptide is capable of neutralizing or modulating the production of anti-myelin basic protein, comprising screening a multiple sclerosis patient for the presence of an HLA-DR2 haplotype, wherein the presence of the HLA-DR2 haplotype in the patient is predictive of therapeutic efficacy of treatment with the peptide.

19 4. The method of any of claims 1 to 3, wherein the HLA-DR2 haplotype comprises DRB1*1501 or DRB1*15021.

20 5. The method of any of claims 1 to 3, wherein the patient has chronic progressive MS.--